GCSE HIGHER · REVISION MAT 4

Averages, spread and box plots

1 Find the range of

23, 17, 41, 35, 29

2 Find the median score.

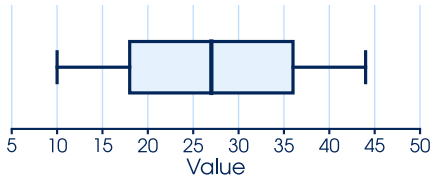
Score	1	2	3	4	5
Frequency	3	5	6	4	2

3 Explain why the mean is not always one of the data values.

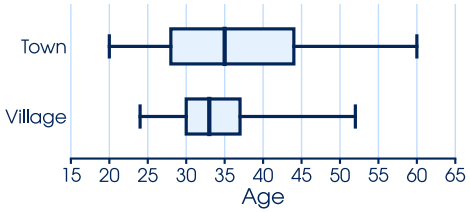
4 Five whole numbers have mode 4, median 6, mean 7 and range 10.

Find the numbers.

5 Show that half of the data lies between 18 and 36.



6 Compare the ages.



7 Explain why midpoints are used to estimate a mean from grouped data.

8 The mean of x, $x + 3$, $2x$ and $3x - 1$ is 11.

Find the median of the four numbers.

ANSWERS · REVISION MAT 4

Averages, spread and box plots

1 **24**

2 20 values: 10th and 11th

Cumulative 3, 8, 14

3

3 **It is the total shared equally, which can be any value, e.g. 2.5.**

4 4, 4, 6, a, b with total 35

$b = 14$, $a = 7$

4, 4, 6, 7, 14

5 **The box goes from Q1 = 18 to Q3 = 36: the middle 50%.**

6 **Town: higher median (35 vs 33)**

Village: smaller IQR (7 vs 16), so more consistent

7 **The midpoint is the best single value to represent each class.**

8 $7x + 2 = 44 \Rightarrow x = 6$

6, 9, 12, 17

10.5